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## May 21.

Mr. Thomas Meehan, Vice-President, in the chair.

Twenty-seven persons present.

*Knee-joint of the Kangaroo.*—Dr. A. J. Parker remarked that in studying the anatomy of various animals, but little attention has been given to the comparative structure of the articulations. One reason for this is, that fulfilling as they do mechanical functions almost similar in different animals, their structure varies but little. In examining the knee-joint of the kangaroo, however, an arrangement of ligaments was met with so different from what is ordinarily found in this joint that it deserves some attention. In man the knee-joint is the most complex of all the articulations, and in the kangaroo it is even more complex than in man. This is in accordance with the increased functional use of the joint in this animal. In making its immense leaps, the knee-joint becomes the centre on which the greater part of the strain is exerted and it requires a corresponding strength of structure. This increase in strength and stability is secured by a peculiar arrangement of the ligaments corresponding to the crucial ligaments of man. These ligaments are three in number and are arranged in a very interesting and complex manner. The posterior horn of the external semilunar fibro-cartilage is free and runs continuously into the fibrous tissue of a crucial ligament which proceeds forwards and inwards, and is inserted into the inter-condyloid fossa. The ligament being thus free at its posterior portion would tend to ride upwards, but this is prevented by a stay ligament which runs from about the middle point of this crucial ligament posteriorly, and is inserted at the posterior part of the spine of the tibia internally, thus keeping it firmly in position. A second crucial ligament arises anteriorly in front of the spine of the tibia, proceeds obliquely upwards and backwards, and is inserted into the inter-condyloid fossa crossing the first ligament obliquely as in man. It also has a stay ligament running from its middle point backwards, and is attached at the posterior internal part of the spine of the tibia at about the same point with the stay ligament running from the first crucial ligament. It is this arrangement of stay ligaments that gives the joint its complex character, and so well fits it to resist strain tending to displace the articular surfaces. A third ligament arises posteriorly and proceeds upwards and forwards crossing the course of the other two, and is also inserted into the inter condyloid fossa internally. Thus there are, counting the two stay ligaments, five distinct ligaments in the knee-joint of the kangaroo as compared with two as found in man, which gives to the joint a very interesting and peculiar mechanical structure. There are no ligamenta alaria or mucosa.

## May 28.

Mr. **Thomas Meehan**, Vice-President, in the chair.

Twenty-three persons present.

*On Polyxenes fasciculatus.*—Mr. J. A. **Ryder** announced that he had identified the myriapod *Polyxenes fasciculatus*, Say, in the vicinity of the city at several places in the park. It was found that its morphological history agreed with that of *P. lagurus*, of Europe, as detailed by Bode,[1] but there was the same paucity of males as observed by that naturalist. The presence of the hooks terminating the caudal bristles was an independent discovery so far as the American species was concerned, Mr. Ryder not having seen Bode's paper until three days after his own observations had been made. Upon comparing these parts of the two species together we find the ends of the bristles, according to Bode, in the European species bent in the form of a semicircle, with the subterminal processes depending parallel to each other from within the arc; in our species, on the other hand, the bristle terminates in two barbed divaricating points directed forwards, forming a subacute angle with the supporting shaft of the bristle, the subterminal processes depending within the angle on the supporting shaft next the animal. This new locality indicates a wide distribution for the animal, viz., from Georgia, where it was first discovered by Say, to Massachusetts, where it has been found by Packard.

*Corundum in North Carolina.*—**Joseph Willcox** said that he desired to place on record a locality for Corundum recently discovered in Iredell Co., North Carolina. Near Statesville, as the southern limit, it is found associated with Kyanite and Serpentine. It is also found at several localities for a distance of twenty miles nearly northeast of Statesville, and at its northern limit it is associated with Steatite, Actinolite, and Damourite. No large specimens of Corundum have yet been found at this locality.

Prof. Gumesindo Mendoza, of Mexico, and Stephen Bowers of Santa Barbara, Cal., were elected Correspondents.

The following paper was ordered to be printed:—

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[1] Zeitsch. f. die gesammten Naturwissenschaften. 3te folge, Berlin, 1877. Bd. II., 8vo. pp. 233–268, Pl. 11–14.